



PUEBLA INTERNATIONAL AIRPORT EXPANSION PROJECT

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For more information on this project, possible financing options and export opportunities in Mexico, contact:

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Overview

The main objective of the Puebla International Airport Expansion Feasibility Study was to estimate the requirements for expanding and modernizing Puebla International Airport's commercial terminal facilities, cargo facilities, airfield facilities, and to provide an updated airport development plan.

Based on projected passenger and cargo growth statistics, the Feasibility Study assessed the facilities requirements and need for (1) expansion of the existing commercial passenger terminal, (2) the addition of a new air cargo aircraft parking apron, and (3) a full-length parallel taxiway with high-speed exit taxiways.

The Feasibility Study integrated a comprehensive airport facilities inventory, technical analysis, and assessment with the projection of a new demand forecast in order to estimate the need for expanding and modernizing the landside and airside facilities, infrastructure, and equipment.

Project Description

In this report, recommendations for expansions are designated for two specific planning periods - 2013 and 2023. These calendar years are the periods in which the recommended expansion should be completed and available for service. Therefore, the design and construction phases of the expansions will be required well in advance of each of the planning periods.

This study presented an inventory of existing airport facilities and an assessment of their conditions related to the Puebla International Airport Expansion.

Key areas of improvements were identified as follows:

- Expanded General Aviation (GA) Apron Taxilane
- Expanded Apron Service Road
- West Expanded Large GA Hangar
- South Expanded Commercial Apron

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- Basis of Commercial Apron Recommendations Number and Types of
- Commercial Airline Aircraft Parking Positions
- Expanded Passenger Terminal
- Expanded Public Parking—Reserve Area
- Expanded Terminal Road
- Expanded GA Apron North Taxilane
- Expanded North-West GA Apron
- North Expanded GA Large Hangar
- Redeveloped Portion of Zone 12
- South West Expanded Commercial Apron
- Runway and Taxiway System

Status and Implementation

By 2009, the following major zones were expanded:

- Zone 1: Existing apron expanded 4,700 square meters
- Zone 2: Existing GA apron expanded 14,700 square meters
- Zone 5: Existing GA apron Expanded 2,200 square meters
- Zone 9: Existing military apron expanded 8,900 square meters
- Zone 10: Existing GA large hangar and Fixed Base Operator (FBO) expanded 11,800 square meters
- Zone 12: Existing GA T- hangar and FBO expanded 19,000 square meters
- Zone 14: Existing GA building expanded 19,400 square meters
- Zone 15: Existing commercial apron expanded 26,300 square meters
- Zone 19: Existing fuel farm expanded 17,000 square meters
- Zone 20: Existing air cargo terminal expanded 38,000 square meters
- Zone 21: Existing passenger terminal expanded 17,000 square meters
- Zone 22: Existing public parking expanded 8,600 square meters
- Zone 24: Existing terminal road expanded 18,900 square meters

The total expansion is 206,500 square meters.

By 2013, the following major zones are expected to be expanded as follows:

- Zone 6: GA apron taxilane expanded 1,800 square meters
- Zone 7: Apron service road expanded 800 square meters
- Zone 11: West GA large hangar expanded 17,000 square meters
- Zone 16: Commercial apron expanded 8,900 square meters
- Zone 18: Passenger terminal expanded 13,300 square meters
- Zone 23: Public parking expanded 8,900 square meters
- Zone 25: Terminal road expanded 13,700 square meters

The total expansion is 64,400 square meters.

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Project Cost and Financing

It is assumed that the airport will finance the projects using a combination of equity (in the form of retained earnings from the on-going operation of the airport and possible additional investments from shareholders), debt (in the form of bank loans) and grants. Grant funding for certain projects in the Airport Development Plan is assumed to be available from various Mexican federal and state governmental agencies.

The airport facilities requirements are subdivided into three separate classifications: (1) Terminal Area, (2) Passenger Terminal, and (3) Airfield— Runway and Taxiways. The Airport Development Plan requirements are separately stated for the facilities available for service at the airport in the three planning periods 2013 and 2023 (indicating the years in which the projects are completed and available for use), and the Planning Period "Beyond 2023" (which anticipates projects beyond 2023).

The Airport Development Plan is further divided into 25 zones and the individual projects are identified by zone. Details of the 25 zones are included in Task 4 and Task 6. Based on capital cost estimates developed in Task 6, the projected cost of the Airport Development Plan projects, inclusive of all planning periods is \$65.7 million (measured in 2009 dollars). For the purposes of the financial analysis, only projects in planning periods 2013 and 2023 are evaluated. Using an inflation rate of 5% per year, planning period 2013 and 2023 projects are estimated to cost \$31.0 million and \$58.3 million in nominal 2012 and 2022 dollars, respectively. A two-year construction period is assumed in each case (the mid-point of construction is used to estimate the construction cost measured in nominal dollars).

The airport's revenues, including interest income, are forecast to increase from \$3.38 million in 2010 to \$21.74 million in 2025. Total airport operating expenses is forecast to increase from \$2.19 million in 2010 to \$12.14 million in 2025.

U.S. Competitiveness and Export Potential

The following list includes items and services for U.S. export potential:

Runway Special Systems and Navigation Aids

- Instrument Landing System
- DVOR/DME System
- Remote Control and Monitoring System
- Surveillance Approach Radar (TASR),
- · ATC-consoles, radar data recorder
- Automated Weather Observation System
- Airfield Ground Lighting
- Precision Approach Path Indicator
- Approach Lighting System
- · Runway Lighting System
- Taxiway Lighting System
- Guidance Signs
- Telex equipment, voice communication system, voice recorder

Terminal Building Special Systems

- Baggage and Parcel Inspection
- Cargo and Vehicle Inspection
- Hold Baggage Screening
- People Screening
- Checkpoint Security

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- Cargo & Vehicle Inspection
- Mail, Parcel & Baggage Inspection
- Personnel Inspection
- X-ray Security
- Trace Detection
- Metal Detection
- Access Control System
- Parking Garages

Terminal Equipment

- Passenger Loading Bridges
- Baggage Handling Systems
- Ticket and Label Printers
- Networked Airport Systems
- Programmable Electronic Signs
- Airport Printers
- Automatic Doors
- Elevators
- Baggage Carts

Ground Handling Equipment

- Towbar Tractors
- Towbarless Tractors
- De-Icing Vehicles
- · Pre-conditioned air units
- 400 Hz Groud Power Units
- Passenger Steps
- Potable Water & Lavatory Trucks
- High Lift Trucks
- Passenger Steps
- Towbarless Tractors
- · Land Clearing Equipment
- Aircraft Towbars
- Twbarless Tugs
- Aircraft Service Cars Oil, Nitrogen,
- Oxygen

Airfield Winter Operational Equipment

- · Runway de-icing equipment
- Snow Removal Equipment

Apron Handling

- Towbar Tractors
- Towbarless Tractors
- Fuel Systems

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- 400 Hz systems
- Power supply

Cargo Handling

- Cargo Loaders
- Coneyors
- Air Cargo Loaders
- Electric Trailers
- Tow Tractors

Emergency Services

- Fire Fighting Trucks
- Emergency trucks
- Fire Alarm Systems

Ground Communications

- Radio Systems
- · Cell phones, wireless communication systems
- Electronic Communication Systems

Fuel Services

- Fuel Tanks
- Fuel Trucks
- Portable Aircraft Fueler/Defuelers

Power

- · Power Distribution Systems
- Emergency power supply

Services

- · Airport Master Planning
- Airport Terminal Planning
- Airport Environmental Services
- · Airport Financial and Business Consulting
- Airport Design and Engineering